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# Role of peritoneal fluid in unexplained and endometriosis associated female infertility

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The present study included 90 female patients attending obstetrics and gynecology departments, Benha University Hospitals, Egypt and Hutzel Hospital, Detroit, Michigan, USA. They were divided into 3 groups. Group I: 30 patients of mild endometriosis, Group II: 30 patients of unexplained infertility and Group III formed of 30 control fertile females. For each patient a full history was taken, and a thorough general abdominal and pelvic examination was done. All infertility factors were evaluated for each patient in the first and second groups. Male fertility was evaluated by complete semen analysis. A postcoital test was performed to exclude cervical factor. A premenstrual endometrial biopsy was taken and examined histopathologically for detection of ovarian function. Hysterosalpingography was performed in the proliferative phase for evaluation of uterine and tubal factor. The peritoneal fluid samples were collected during laparoscopy at the proliferative phase of the cycle. PF samples were subjected for estimation of the total protein concentration, detection of different protein bands by SDS - PAGE, qualitative and quantitative estimation of the cytokine TNF- $\alpha$  by western blotting and ELISA, in addition to study the effect of PF on 2-cell mouse embryos development. Our results revealed that: [J] Total protein concentration showed statistically significant increases in endometriotic group compared to the control and unexplained infertility groups (P